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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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James R. Hochstein JR.

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SUITE 1201

NEW HAVEN, CT 06510

EXAMINER

NDUBIZU, CHUKA CLEMENT

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/733,889	Applicant(s) HOCHSTEIN ET AL.	
	Examiner CHUKA C. NDUBIZU	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>appendix1</u> . |

DETAILED ACTION

Response to Amendment

This action is a follow-up to the pre-Appeal conference decision mailed on January 29 2008. As a result of the pre-Appeal conference decision the finality of the last Office action mailed on August 23 2007 is hereby withdrawn and prosecution is reopened.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first portion being downstream of the second and third (non-straight) portions and the first portion having a varying cross-section with the upstream being smaller than the down stream, must be shown or the feature(s) canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not quite clear in what way the cross-sections are similar - area, shape etc. Since neither the drawing nor the specifications disclosed first portion downstream of the second and third (non-straight) portions and the first portion having a varying cross-section which increases from upstream to down stream, Examiner finds it difficult to determine what is being claimed in light of the entire invention. Therefore no art is applied to claim 7. This is not an indication of allowable subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Plavnik et al 6,684,823. Plavnik teaches the invention as claimed (fig 1-20) an apparatus for cleaning a surface within a vessel having a vessel wall 20 separating a vessel exterior from a vessel interior and having a wall aperture, the apparatus comprising: a source of fuel and oxidizer 124, 126 (fig 14); an igniter 128 for initiating reaction of the fuel and oxidizer; and an elongate conduit (fig 14) having a first end and a second end (at 130) and positioned to direct a gas flow of the reacted or reacting fuel and oxidizer through the wall aperture and discharge from the second end (see fig 13) and comprising a plurality of segments (labeled a-g, see Appendix) secured end-to-end against relative movement; a nozzle assembly 130 extends at least partially through the vessel wall (fig 13); at least one of the segments (f) is an elbow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 3, 6, 8, 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plavnik in view of Jennings et al 2,972,502. Plavnik teaches the invention as claimed and as discussed above. Plavnik also teaches at least three of the segments each comprise: a tubular body having first and second ends (see fig 14 and appendix);

However Plavnik does not teach, segments with flanges attached to the ends, conduit comprising essentially of three portions; an essentially straight first portion; an essentially straight second portion, upstream of the first and a third non-straight portion in between the two; wherein the first and second portions are parallel and offset; wherein the first of the segments is parallel and offset from the second of the segments.

Jennings et al teaches a soot blower (see fig 9B) comprising, a conduit having segments with flanges attached to the ends (see fig 9B); first straight portion (vertical member sitting on the elbow on the left of 322), second straight portion (similar member on the right) and third non-straight portion (horizontal tube 322 including the two elbows at the ends); wherein the first and second portions are parallel and offset.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Plavnik's conduit by including the limitations taught by Jennings and recited above in order to facilitate passing the conduit around obstacles.

With regard to claim 20 since Applicant failed to specifically point out which of the segments is a first and a second and it is impossible for a consecutive first and second segments to be parallel and offset, Jennings's first and second segments (two vertical tubes) meet the limitations of the claim.

4. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plavnik in view of Jennings and further in view of Hunter 5,494,004. Plavnik in view of Jennings teaches the invention as claimed and as discussed above.

However, Plavnik in view of Jennings does not teach at least three of the conduits being 1-3 m and the characteristic internal cross-sectional areas being about 0.006-0.3 m²; and the first and second portions being oriented at an angle of 20-160 degrees.

Jennings disclosed that the first and second portions are oriented at an angle of 180 degrees. Hunter discloses that the first 21 and second 31 portions can be oriented at an angle between 0 and 180 degrees to each other, since the member 31 can rotate to clean the wall 360 degrees about the opening 81 (column 3 line 30-34). Hunter also discloses that the second portion cross-sectional area is greater than 0.005 m² (column 6 line 62) and the two portions have a length of about 7 ft (2.15 m) (column 5 line 15). Therefore, the limitations in claims 2 and 9 are matters of optimization within prior art conditions, which will be obvious to one of ordinary skill in the art; "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover

the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A.

Response to Arguments

Applicant's arguments with respect to claims 1-9, 16-20 have been considered but are moot in view of the new grounds of rejection. Plavnik discloses segments secured end to end against relative movement. Plavnik's conduit is used to clean heat exchangers using both deflagration and detonation waves (see Abstract).

Conclusion

The prior art made of record in the attached USPTO 892 and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUKA C. NDUBIZU whose telephone number is (571)272-6531. The examiner can normally be reached on Monday - Friday 8.30 - 4.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chuka C Ndubizu/
Examiner, Art Unit 3749

20080325

/Steven B. McAllister/
Supervisory Patent Examiner, Art Unit 3749